COMPLETE WIRELESS HOUSE ALARM

USER MANUAL

In order to completely understand the function of this system,please have a thorough reading of this book

MAIN FUNCTIONS AND FEATURES OF THE WIRELESS INTELLIGENT PROTECTION AND SECURITY ALARM SYSTEM

MAIN FUNCTION AND FEATURES

1. DC 9V power supply, standby current less than 20mA.
2. Six groups of alarm telephone numbers can be pre-stored
3. Ten seconds pre-recorded memo messages
4. Long distance via public telephone network set guard status or withdraw guard to the main dialer
5. Long distance via public telephone network monitor the background sound around the auto-dialer
6. Setting guard delay time 0~90 seconds for four guard zone
7. Setting alarm delay time 0~90 seconds for four guard zone alarm signal
8. Siren hooting time length control option 1~20 minutes
9. Telephone line cut off alarm function option
10. Six wireless distinguishable guard zones LED indicator on the main set
11. Each of the four guard zones can be set on gaurd or withdraw guard independently.
12. One panic key for help provided on the main set
13. Two panic keys for help is provided on the remote controller which will make the main dialer give out loud sound or not as well as dialing when being trigged
14. Convenient key input is prepared on the front panel

Various kinds of door magnetic switch and PIR infrared detector are configurable. Rechargeable DC9V power transformer provided for power cut backup. The dialer can report the alarm messages to an administration computer immediately via the public telephone network .

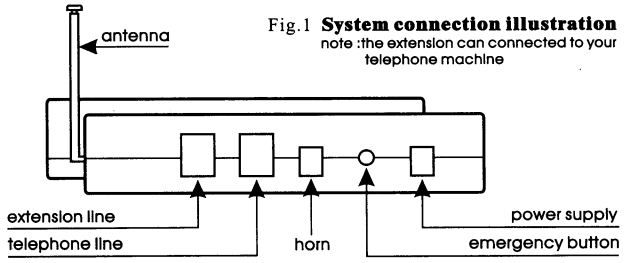


Fig.1 **System connection illustration**
note :the extension can connected to your telephone machine

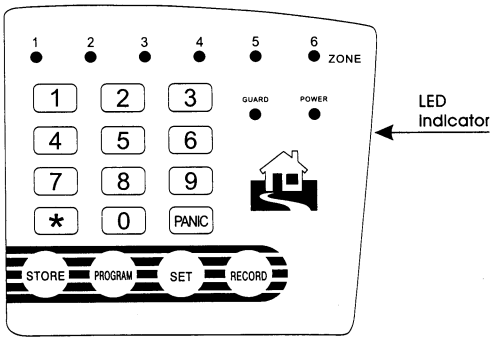


Fig.2 **Setting panel illustration**

Set guard and withdraw guard

This alarm system can be divided into four alarm guard zones. Each guard zone can configured with several door entry detectors, infrared detectors, gas leakage detectors and smoke detectors.You can set guard or withdraw guard using the remote controller or by pressing the keypad on the main set.

1、Setting guard by using remote controller

*** Setting guard**:

Press and release " 🔒 " key on the remote controller, the "GUARD" LED on the main set will light up,buzzer beep one time ,the main set went into status of setting guard. At this time, if the main set received the alarm signals from detectors , it will alarm if set no delay time, but if you set a delay time for guard,for example 30 seconds, setting guard will take into effect only after 30 seconds later from the time you pressed the " 🔒 " key. This delay time can be normally left for you to prepare to exit your house entry.

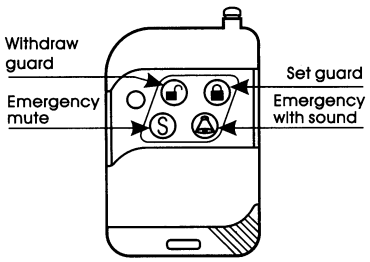


Fig.3 **Remote controller illustration**

withdraw guard setting by remote controller:

Press and release " 🔓 " key on the remote controller, the "GUARD" LED on the main set will go out, the main set went into status of withdraw guard. At this time, if the main set received the alarm signals from all detectors of zone 1,2,3,4, it will not alarm.

2、setting guard by pressing keypad on the main set

***Setting guard on the keypad**:

When not in alarm state, press four digits user password consecutively (for example: "1234" ,etc), then press key "set" , then press digit "9" ,the "GUARD" LED on the main set will light up, the main set went into status of setting guard. At this time, if the main set received the alarm signals from detectors, it will alarm at once or delayed for a period of option time(0~90s),

*** withdraw guard on the keypad**

Press four digits user password consecutively,then press key set,then press digit 0,the main set went into withdraw guard,in this state,if the main set received the alarm intruder signal from the detectors,it will not alarm, but if it received trigger signal from the panic button of the remote controller, it will alarm and dial out telephone numbers automatically.

3.Open or close a guard zone alarm

each of the four guard zone can be opened or closed,if a guard zone is closed,the main set will not report out alarm signal from the guard zone received.For example,if a PIR detector or door contacts is set belong to guard zone 3,when this detector emit signal to the alarm main set,the main set zone 3 will not report signal out even in guard state,but other detectors belong to other zones will be working as usual.

***withdraw guard setting**:

When not in alarm state,press four digits user password consecutively (for example: "1234" ,etc),then press key " set" , then press digit "0" ,the "GUARD" LED on the main set will go out, the main set went into status of withdraw guard. At this time, if the main set received the alarm signals from all detectors of zone 1,2,3,4, it will not alarm.

When in alarm state,simply press four digits user password on the keypad will cancel guard and stop alarm.

Each guard area is corresponding to a LED indicator on the front panel, when alarm take place, the corresponding LED light up, then the alarm system dial out the telephone numbers and alarm.

The guard zone doesn't mean the same area, that is to say, detectors in different places can be configured into the same guard zone and light up the same alarm LED,As how to configure a detector to a guard area will be illustrated later.When this alarm unit manufactured out, its initial status is setting full guard.

In this AST-2008D standard configuration kit(standard configuration), the enclosed door entry detector (door contacts) is configured to the guard zone 2st, the enclosed infrared detector is configured to guard zone 1st, according to your need, you can add any detectors to guard 1,2,3,4 which corresponding to the four LED indicator respectively.

Partial guard setting:

Each of the four guard zone can be opened or closed independently by input digit key on the keypad as follows:

open guard zone 1: press four digit password first, then press: set+1
close guard zone 1: press four digit password first,then press: set+2
open guard zone 2: press four digit password first,then press: set+3
close guard zone 2: press four digit password first,then press: set+4
open guard zone 3: press four digit password first,then press: set+5
close guard zone 3: press four digit password first,then press: set+6
open guard zone 4: press four digit password first,then press: set+7
close guard zone 4: press four digit password first,then press: set+8

If a guard zone is set closed,the detectors of the zone will not trig any alarm even in guard setting status.

Emergency alarm function:

When met emergency event, you can press the panic key, the system will immediately put into emergency alarm state, if you press the panic key " 🔔 " on the remote controller, the system's siren will give out loud sound as well as dial out the pre-stored telephone numbers. and if you press the panic key "S" on the remote controller, the system's siren will not give out sound but dial out the pre-stored telephone numbers as well.

There is also an panic key on the forward side of the alarm main set.

Alarm System setting method:

1.Store alarm telephone number

Press key on the keypad as follows:

"four digit user password" + "store" + "group number(1~6)" + "*" + telephone number+ "store"

For example, if you want to store first group telephone numbers such as "66778899" ,you press key four digit password(such as "1234" or other) at first, then press "store" , then press "1" ,which means first group, then press "*" , then press "66778899" , then press "store" , this finish first group numbers storing.

For example, if you want to store second group telephone numbers such as "012345678" , you press key: four digit password(such as "1234" or other) at first, then you press key "store" , then press "2" , which means second group, then press "*" , then press "012345678" , then press "store" , this finish second group numbers storing.You can store maximum total six groups of telephone numbers respectively.

If your alarm telephone connected to an extension telephone line, and have to dial a digital number such as "9" or "0" , etc. before input the telephone number , you can store the alarm telephone numbers like this,

Press key : four digit password(such as "1234" or other) at first,then you press key "store" + "group numbers(1~6)" + "*" + "9" (or "0" , etc.) + "*" + "*" + " telephone numbers" + "store" .

2. Delete alarm telephone number

Press key : four digit password (such as "1234" or other) at first, then you press key : "store" + "telephone group number (1~6)" + "*" + "store"

For example, if you want to delete second group telephone numbers, Press key : four digit user password (such as "1234" or other) at first, then you press key "store" , then press "2" ,which means second group, then press "*" , then press "store" , this delete second group telephone numbers.

3.Alarm memo recording

Press key : four digits user password(such as "1234" or other) at first, then you press key "record" and release, the record LED indicator light up, you can start record, speaking time not more than 10 seconds, then press the key "record" again, the record LED indicator went out, this finished the recording process.

Record content can be as: "this is alarm telephone,which place which home has found illegal intruders,please help to process it" .

4. Setting alarm with sound

Press key : four digit user password(such as "1234" or other) at first, then you press key "program" + key "1" , the system will give out sound when alarm taking place.

The initial settings is alarm with sound.

5. Setting alarm with no sound

Press key : four digit user password(such as "1234" or other) at first, then you press key "program" + key "2" , the system will not give out sound when alarm taking place

6.Clear all settings and restore to its initial values

Press key : four digit password(such as "1234" or other) at first, then you press key "program" , then press key "4" .

This function clear all settings but the user password, include pre-stored telephone numbers, all settings will be restored to its initial settings as it manufactured out. This function is often useful to diagnosis the " obstacles" which may be resulted by your wrong settings.

7. Alarm siren hooting time setting

Press key: four user digit password at first,then press key:

"program " + "3" + "program" +time(1~20minutes)+ "program"

siren hooting time when alarm taking place can be set to 1~20minutes its initial value is 1minute.

8. Setting guard with delay option

Press key: four user password at first,then press:

"program" + "5" + "program" +time(0~90seconds)+ "program"

setting guard with remote controllers or by pressing keypad will be valid after delay this option time,its initial value is zero,no delay.

9.Setting alarm delay time.

Press key: four user password at first,then press:

"program" + "6" + "program" +time(0~90seconds)+ "program"

when the main set received alarm signal under guard state,it will wait a period of time 0~90seconds and then report alarm.the initial value is zero,no delay.

10. Open telephone line cut-off detect function

Press key: four user digit password (such as "1234" or other) at first, then you press key "program " + "7" , this function will make the alarm system hooting when its telephone line cut off.

11. Close telephone line cut-off detect function

Press key: four user digit password(such as "1234" or other) at first, then you press key "program" + "8" , this function will not make the alarm system hooting when its telephone line cut off.

12.Modify user password

Press key: four digit user password(such as "1234" or other) at first, then you press key "program" + key "9" + key "program" + key "four digit new password" + key "program" ,the initial user password settings is "1234" , this user password must remember. If you forget this password, you can press down the " 🔓 " key for ten seconds, you will hear a short beep and a long beep sound, the password will restore to its initial settings "1234" .

13.Modify network connection user ID code

Press key: four digit user password (such as "1234" or other) at first, then you press key: "program" + "0" + "program" + "four digit ID code" + "program"

This four digit user ID code is used in network connection application when using an administration computer to receive and process the alarm messages.

Receiving alarm messages and processing

When alarm broke out, the siren will resound as you selected, the system will automatically dial out the pre-stored telephone numbers and send memo messages to the alarm callee telephone. When you connected on your telephone to the alarm set and hear the pre-recorded memo messages by the telephone, you can press the key on your telephone to process the alarm messages as you need:

you can input the digital key on your callee telephone as follows,

Press key "1" : set guard
Press key "2" : withdraw guard
Press key "5" : start up siren
Press key "6" : shut off siren
Press key "7" : open background monitor
Press key "8" : close background monitor
Press key "9" : withdraw guard and auto-dialer hook on

If you press key "7" on your callee telephone, you can monitor the sound given out around the alarm set, but the monitor time is only lasted for 20 seconds when you press the key "7" one time. If you want to continue to listen to the sound around the ast-2008D alarm set, you have to press the key "7" again on your callee telephone (alarm receive telephone) not more than 20 seconds interval.

If you don't withdraw guard when you received the alarm, the alarm set will dial the pre-stored next group telephone numbers consecutively.

Please remember, it will take 30 seconds time to play the pre-recoded messages each time while auto dial each group of alarm telephone.

Telecommunication operation by telephone:

If you need to operate the alarm system far away, you can dial the alarm system by any other telephone far or near, after five times ring-back sound, the alarm system will automatically hook off and prepare to process the command you give out from the caller telephone, you have to input four digits telecommunication operation user password (its initial value is "1234", and you can modify it by yourself) on your caller telephone at first, then you can set the alarm system by input digital number as command on the telephone you used:

Press "1" : setting guard of the alarm system
Press "2" : withdraw guard of the alarm system
Press "3" : setting alarm with sound
Press "4" : setting alarm with no sound
Press "5" : startup the siren
Press "6" : shut off the siren
Press "7" : open background sound monitor
Press "8" : close background sound monitor
Press "9" : exit telecommunications settings and hook on.
Press "01" : open guard zone one alarm reporting
Press "02" : close guard zone one alarm reporting
Press "03" : open guard zone two alarm reporting
Press "04" : close guard zone two alarm reporting
Press "05" : open guard zone three alarm reporting
Press "06" : close guard zone three alarm reporting
Press "07" : open guard zone four alarm reporting
Press "08" : close guard zone four alarm reporting

If no key input more than ten seconds, the alarm system auto-dialer will hook on and exit telecommunication setting automatically.

If you press key "7" on your caller telephone, you can monitor the sound given out around the alarm set, but the monitor time is only lasted for 20 seconds when you press the key "7" one time. If you want to continue to listen to the sound around the ast-2008D alarm set, you have to press the key " 7 " again on your caller telephone not more than 20 seconds interval.

Installation and use guide Infrared detector installation and use

Open the power switch on the side of the detector at first. Mounting height is adjust to 2.2m or so. Mounted on the corner of the room is preferable, and its detecting direction perpendicular to people walking direction will have best effect.

Mounting method: take out the bracket in the accessories and fix it on your wall, fix the detector to the bracket and adjust its detection angle to best position. the following aspect should be noted:

1. The infrared detector may not direct to outward window.
2. Obstacles on its front have negative effect
3. More than two infrared detectors should not installed on the same area
4. Strong wind flow, fire, radiator should be avoided, for it may trig wrong alarm message.
5. When the infrared detector powered up, it will take five minutes to adapt itself to working mode
6. The infrared detector can only used in closed room, not used in open ground.

Door entry detector (magnetic switch & emitter) installation and use

1. The emitter of door entry detector is mounted on the edge of moveable door, and the magnetic bar is mounted on the fixed doorframe. The two pieces of devices must be not more than 1cm distance when the door closed.
2. The magnetic bar must be installed near to the emitter side of LED indicator.

ENCODING AND DECODING METHOD OF THE WIRELESS ALARM SYSTEM

ENCODING METHOD

Fig. 8 the middle row all in float state

Fig. 9 the 8 bit address code in the middle row all in float state "0", the zone code is "2211" (zone 1).

Fig. 10 the 8 bit address code in the middle row all in float state "0", the zone code is "2121" (zone 2).

Fig. 11 the 8 bit address code in the middle row all in float state "0", the zone code is "2112" (zone 3).

Fig. 12 the 8 bit address code in the middle row all in float state "0", the zone code is "2111" (zone 4).

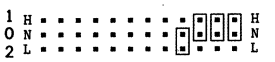


Fig. 13 the 8 bit address code in the middle row all in float state "0", the zone code is set as "2212", that is 24 hours guard zone, or emergency zone, used for wireless emergency button or for smoke detectors, gas leakage detectors.

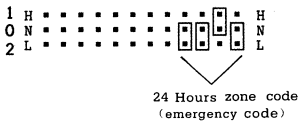


Fig. 14 the 8 bit address code in the middle row is set as "21120102", the zone code is "2211" (zone 1).

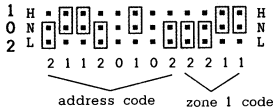
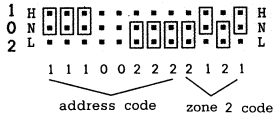


Fig. 15 the 8 bit address code in the middle row is set as "11100222", the zone code is "2121" (zone 2).



Encoding and decoding method of the wireless alarm system

This alarm system use wireless transmission style to communicate with its wireless detectors. To protect each alarm system from interfering each other, the wireless signal can use different encoding style for different alarm system. you can add detectors to an alarm system by encode the detectors.

Each alarm system has its unique wireless communication code, this include 8 bit address code A0,A1,A2,A3,A4,A5,A6,A7, and 4 bit zone code(or data code) D0,D1,D2,D3, each set of alarm system has only one address code, but can have several zone code. The address code is for communication only, we printed it out on the bottom side of the alarm set, marked as "Product No", the zone code is used to distinguish different alarm signal from different detectors (or same kind detectors with different encoding). For example, we have 4 LED indicator on the keypad of the alarm set, the "alarm 1" LED is corresponding to zone 1, the "alarm 2" LED is corresponding to zone 2, the "alarm 3" LED is corresponding to zone 3, the "alarm 4" LED is corresponding to zone 4, etc.

We use the "short jumper slip" option to realize the encoding, you can use a screw driver to take off the screw of the infrared detectors and open the cover, on the power switch side of the electronic circuit board, you can see 36 metal pins, this 36 metal pins is used to encode the 8 bit address code and 4 bit zone code.

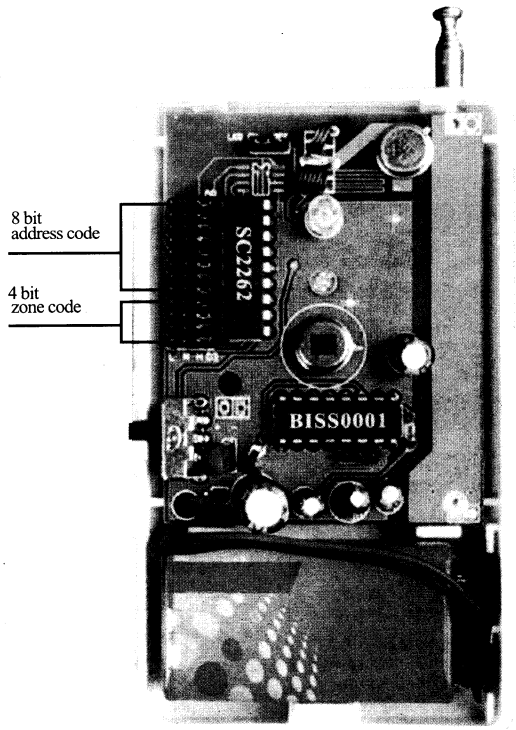


Fig.3 built-in circuit of infrared detector

Fig. 16 the 8 bit address code in the middle row is set as "12202011", the zone code is "2112" (zone 3).

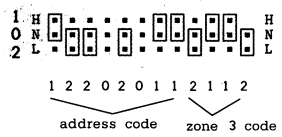


Fig. 17 the 8 bit address code in the middle row is set as "22212011", the zone code is "2112" (zone 3).

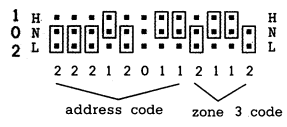
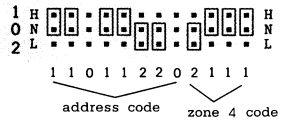


Fig. 18 the 8 bit address code in the middle row is set as "11011220", the zone code is "2111" (zone 4).



Zone five's code is 1221, Zone six's code is 1212

If you want to add detector to your alarm set, there will be two method, the first method is you configure the detectors according to the short jumper slip setting way same as the detectors in your standard kit, the second method is you consult the 8 bit address code from the "Product No" on the bottom of your alarm set, and encode 4 bit zone code following the above schematic diagram as you need.

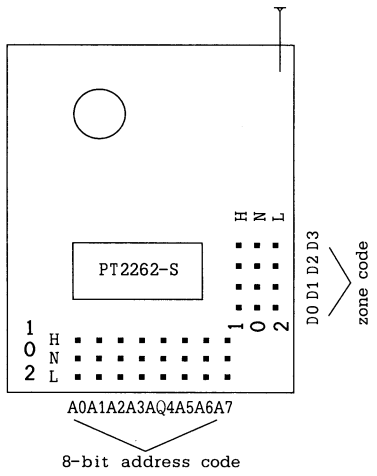


Fig.19 illustration diagram of R F emitting module

You can also open the emitter part of the door entry contacts, there are also 36 metal pins on the side of the electronic circuit board. this 36 metal pin is also used to encode the 8 bit address code and 4 bit zone code.

Fig.5 built-in circuit of door entry detector

There are total 3 row pins, each row has 12 pins, the 12 pins in the row near the IC SC2262 (or HS 2262,or PT2262) is high electric level, marked by H, the 12 pins in the row near the side of the electric circuit board is low electric level, marked by L, the 12 pins in the middle row is to be set by short jumper slip, if a pin in the middle row is connected by a short jumper slip to the H row pin, we called the pin encoded as "1" , if a pin in the middle row is connected by a short jumper slip to the L row pin, we called the pin encoded as "2" , if a pin in the middle row is not connected by a short jumper slip (or in float state), we called the pin encoded as "0" , the 8 pins in the middle row for address code has three encoding state, " 1" , " 0" , "2" . The 4 pins in the middle row for zone code has only two encoding state, " 1" , "2" , that is say the 4 bit zone code has no float state "0" .

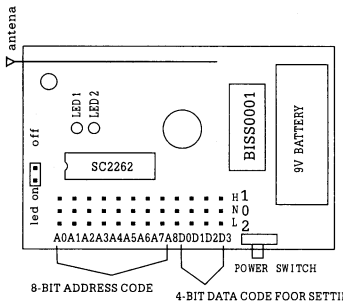


Fig.6 illustration diagram of infrared detector encoding

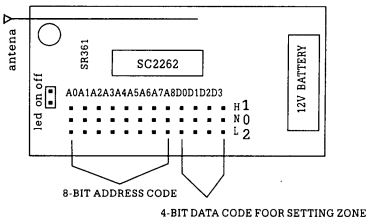


Fig.7 illustration diagram of door entry detector encoding

The wireless smoke detector and gas leakage detectors each has an wireless emitting module inside the plastic cover. There are also 36 pins to set the 8 bit address code and 4 bit zone code on the emitting module.

The 8 bit address code is on the bottom side, and the 4 bit zone code is on the right side, the 8 bit address code is also same as infrared detectors for the same alarm set, but we can set the 4 bit zone code as 24 hours guard zone, of course, your can also set the zone code as zone, 1,2,3,4, as you like. The 24 hours guard zone will report alarm messages even if you withdraw guard.

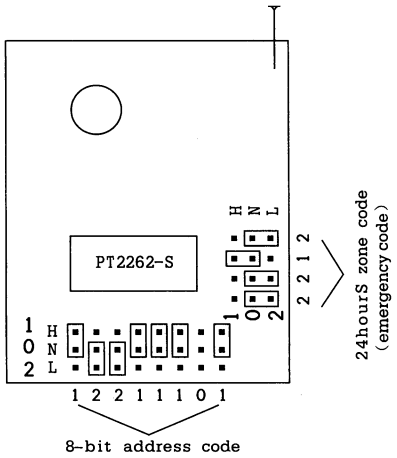


Fig.20 illustration diagram of R F emitting module encoding

A wireless emergency button is generally configured as 24 hours guard zone in the same method.

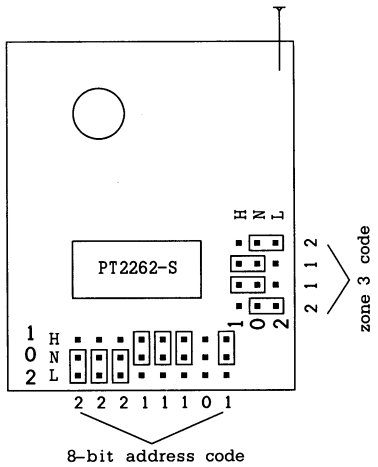


Fig.21 illustration diagram of R F emitting module encoding